National Institute of Environmental Health Sciences

Adult and child malaria mortality in India: A nationally representative mortality survey

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Abstract:

Background: National malaria death rates are difficult to assess because reliably diagnosed malaria is likely to be cured, and deaths in the community from undiagnosed malaria could be misattributed in retrospective enquiries to other febrile causes of death, or vice-versa. We aimed to estimate plausible ranges of malaria mortality in India, the most populous country where the disease remains common. Methods: Full-time non-medical field workers interviewed families or other respondents about each of 122 000 deaths during 2001—03 in 6671 randomly selected areas of India, obtaining a half-page narrative plus answers to specific questions about the severity and course of any fevers. Each field report was sent to two of 130 trained physicians, who independently coded underlying causes, with discrepancies resolved either via anonymous reconciliation or adjudication. Findings: Of all coded deaths at ages 1 month to 70 years, 2681 (3·6%) of 75 342 were attributed to malaria. Of these, 2419 (90%) were in rural areas and 2311 (86%) were not in any health-care facility. Death rates attributed to malaria correlated geographically with local malaria transmission ratesderived independently from the Indian malaria control programme. The adjudicated results show 205 000 malaria deaths per year in India before age 70 years (55 000 in early childhood, 30 000 at ages 5—14 years, 120 000 at ages 15—69 years); 1·8% cumulative probability of death from malaria before age 70 years. Plausible lower and upper bounds (on the basis of only the initial coding) were 125 000—277 000. Malaria accounted for a substantial minority of about 1·3 million unattended rural fever deaths attributed to infectious diseases in people younger than 70 years. Interpretation: Despite uncertainty as to which unattended febrile deaths are from malaria, even the lower bound greatly exceeds the WHO estimate of only 15 000 malaria deaths per year in India (5000 early childhood, 10 000 thereafter). This low estimate should be reconsidered, as should the low WHO estimate of adult malaria deaths worldwide.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3021416

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Unspecified Exposure

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☒

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: India

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Malaria

Population of Concern: A focus of content

Population of Concern: ☒

populations at particular risk or vulnerability to climate change impacts

Children, Elderly

Resource Type: ☒

format or standard characteristic of resource

Research Article

Timescale: ☒

time period studied

Time Scale Unspecified